Amendments to the Claims

A complete set of the existing claims are set forth below, with the amended claims showing deletions (strikethroughs) and insertions (underline).

1. (Currently amended) A projection system comprising:

a solid state light source;

a power supply coupled to the solid state light source to provide power to the solid state light source;

a sensor either coupled to or integrated with the solid state light source to monitor a region of the solid state light source for a thermal condition, and output a signal indicative of the thermal condition of the monitored region;

an active cooling arrangement thermally coupled to the solid state light source ~~adapted to selectively provide~~ to provide more ~~or less~~ than one level of cooling to the solid state light source; and

a controller coupled to the sensor and the active cooling arrangement to conditionally initiate ~~one or more thermal management~~ a selective level of cooling to the solid state light source ~~actions~~ using the active cooling arrangement based at least in part on the thermal condition of the region as indicated by the signal.

2. (Original) The projection system of claim 1, wherein the solid state light source comprises a selected one of a light emitting diode and a laser diode.

3. (Currently amended) The projection system of claim 1, wherein the controller is designed to control operations of the active cooling arrangement to impart more cooling ~~on~~ to the solid state light source when the thermal condition of the region exceeds an upper end operational threshold and/or to impart less cooling to the ~~on the~~ solid state

light source when the thermal condition of the region is under a lower end operational threshold.

4. (Previously amended) The projection system of claim 1, wherein the active cooling arrangement comprises a fan, and the controller controls a speed of the fan, varying an amount of air flow the fan drives pass the solid state light source.

5. (Currently amended) The projection system of claim 1, wherein the active cooling arrangement comprises a cooling pipe, and the controller controls a flow rate of the cooling pipe, varying an amount of fluid flow pass the solid state light source from no fluid flow to a selective one of multiple levels of fluid flows.

6. (Previously amended) The projection system of claim 1, wherein the active cooling arrangement comprises a thermoelectric cooler, and the controller controls an operation level of the thermoelectric cooler, varying an amount of heat being removed from the solid state light source.

7. (Original) The projection system of claim 3, wherein the projection system further comprises drive circuitry coupled to the solid state light source to drive the solid state light source, and the controller is further coupled to the drive circuitry to influence its operation, indicating to the drive circuitry to vary an amount of drive voltage or current the drive circuitry applies to the solid state light source, based at least in part on the thermal condition indicated by the signal.

8. (Original) The projection system of claim 1, wherein the projection system further comprises drive circuitry coupled to the solid state light source to drive the solid state light source, and the controller is coupled to the drive circuitry to influence its operation,

indicating to the drive circuitry to vary an amount of drive voltage or current the drive circuitry applies to the solid state light source, based at least in part on the thermal condition indicated by the signal.

9. (Original) The projection system of claim 1, wherein the projection system further comprises

a processor coupled to the light source to control the light source to project an image; and

an input interface coupled to the processor to facilitate input to the processor pixel data of the image.

10. (Previously presented) The projection system of claim 9, wherein the processor comprises the controller.

11. (Previously amended) The projection system of claim 9, wherein the projection system further comprises a television tuner coupled to the input interface.

12. (Currently amended) In a projection apparatus, a method of operation comprising:

monitoring a region of a solid state light source of the projection apparatus for thermal condition through a sensor either coupled to or integrated with the solid state light source, and outputting a signal indicative of the thermal condition of the monitored region, the solid state light source being coupled to a power supply to supply power to the solid state light source; and

conditionally initiating, based at least in part on the thermal condition of the region as indicated by the signal, ~~one or more thermal management actions~~ a selective level of cooling from a plurality of levels of cooling using an active cooling arrangement

that is thermally coupled to the solid state light source ~~adapted to selectively provide~~ and adapted to provide more ~~or less~~ than one level of cooling to the solid state light source.

13. (Currently amended) The method of claim 12, wherein said conditionally initiating of ~~one or more thermal management actions~~ a selective level of cooling comprises conditionally controlling the active cooling arrangement to impart more cooling on the solid state light source when the thermal condition of the region exceeds an upper end operational threshold and/or to impart less cooling to the ~~on the~~ solid state light source when the thermal condition of the region is under a lower end operational threshold.

14. (Currently amended) The method of claim 12, wherein said conditionally initiating of ~~one or more thermal management actions~~ a selective level of cooling comprises conditionally controlling the active cooling arrangement by controlling a speed of a fan, varying an amount of air flow the fan drives pass the solid state light source.

15. (Currently amended) The method of claim 12, wherein said conditionally initiating of ~~one or more thermal management actions~~ a selective level of cooling comprises conditionally controlling the active cooling arrangement by controlling an operation level of a thermoelectric cooler, varying an amount of heat being removed from the solid state light source.

16. (Currently amended) The method of claim 12, wherein said conditionally initiating of ~~one or more thermal management actions~~ a selective level of cooling comprises conditionally controlling the active cooling arrangement by controlling a flow rate of a cooling pipe, varying an amount of fluid flowing pass the solid state light source from no fluid flow to a selective one of multiple levels of fluid flows.

17. (Currently amended) The method of claim 13, wherein the method further comprises applying ~~an~~ selective amount of ~~a selected one of a~~ voltage and ~~a~~ current to drive the solid state light source, and conditionally indicating a variation to the selective amount of ~~the selected one of~~ the voltage and the current to be applied, based at least in part on the thermal condition indicated by the signal.

18. (Currently amended) The method of claim 12, wherein the method further comprises applying ~~an~~ selective amount of ~~a selected one of a~~ voltage and ~~a~~ current to drive the solid state light source, and conditionally indicating a variation to the selective amount of ~~the selected one of~~ the voltage and the current to be applied, based at least in part on the thermal condition indicated by the signal.

19. (Currently amended) A projection apparatus comprising:

solid state light source means for providing light;

power supply means coupled to the solid state light source means to provide power to the solid state light source means;

means for monitor of a region of the solid state light source means for a thermal condition, and output a signal indicative of the thermal condition of the monitored region;

an active cooling means thermally coupled to the solid state light source means ~~for selectively~~ to provide~~ing~~ more ~~or less~~ than one level of cooling to the solid state light source means; and

controller means for conditionally initiating ~~one or more thermal management actions~~ a selective level of cooling using the active cooling means based at least in part on the thermal condition of the region as indicated by the signal.

20. (Currently amended) The projection apparatus of claim 19, wherein the controller means is designed to control operations of the active cooling means to impart more cooling ~~on~~ to the solid state light source means when the thermal condition of the region exceeds an upper end operational threshold and/or to impart less cooling to the ~~on the~~ solid state light source means when the thermal condition of the region is under a lower end operational threshold.